



California Regional Water Quality Control Board

San Francisco Bay Region



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Fact Sheet

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Water Board Approves Baseline Risk Assessment Report Hookston Station Site and Adjacent Areas Pleasant Hill, California

This Fact Sheet has been prepared to update community members on the status of the environmental investigations at the Hookston Station Site in Pleasant Hill, California.

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RISK ASSESSMENT SUMMARY

The Baseline Risk Assessment quantifies the theoretical health risks to the community from the Hookston Station Site as well as from other upgradient sources of groundwater that is contaminated with volatile organic compounds (VOCs), and provides the framework to evaluate potential remedial actions. The report identifies vapor intrusion into indoor air and use of groundwater as the primary exposure pathways that will drive the cleanup plan. The report presents two estimates of exposure and theoretical risk that potentially result from inhalation of chemicals in residential indoor air. Board staff considers the higher inhalation rates used for the second exposure estimate to be upper-bound rates that conservatively estimate the maximum credible exposure by child and adult residents northeast of the Site ("offsite" residents). An excess cancer risk of less than or equal to one-in-one-million is considered to be an "acceptable" risk for multi-pathway exposures. *See page 2 for a comparison of risk estimates.*

The Baseline Risk Assessment evaluates cumulative risk for three different types of receptors: residents who live nearby, over the groundwater plume ("offsite" residents), assuming a lifetime of exposure; workers on Hookston Station itself ("onsite" workers); and construction workers at Hookston Station. Ingestion of groundwater is not a risk for offsite residents or onsite workers, because all residences and businesses in the area are served by Contra Costa Water District. The primary theoretical lifetime excess cancer risk for offsite residents is from inhalation of indoor air. Residential indoor air, groundwater from private wells, and surface water from Walnut Creek do not pose risks for noncancer adverse health effects.

Theoretical lifetime excess cancer risks for off-site residents exposed to VOCs (from all potential sources) in indoor air range from less than one in one million to about 80 in one million, depending on the residential location sampled and which inhalation rate is used.

The theoretical lifetime excess cancer risk associated with incidental ingestion and contact with groundwater depends on how it is used. The calculated “worst-case” theoretical excess cancer risk is about 6.8 in one million if groundwater is used for irrigation, and about 8 in one million if groundwater is used to fill a swimming pool. Most private wells have been sampled, and several wells have been properly abandoned at the expense of the responsible parties. Theoretical lifetime excess cancer risk resulting from inhalation of VOCs volatilizing from surface water (Walnut Creek) is slightly more than one in one million. Cumulative “worst-case” theoretical excess lifetime cancer

risks for offsite residents exposed to VOCs in indoor air, groundwater, and surface water range from about 16 to about 96 in one million.

The calculated maximum theoretical lifetime excess cancer risk is about 2.4 in one million for inhalation of trichloroethylene (TCE) in indoor air by commercial/industrial workers at the Hookston Station property (“onsite” workers). Theoretical lifetime excess cancer risk associated with construction worker exposure to chemicals in onsite soil is about 43 in one million, due largely to elevated arsenic concentrations in some surface soil samples.

The calculations in the Baseline Risk Assessment indicate that a portion of the calculated risks outlined above stems from chemicals other than TCE, such as benzene and perchloroethylene (PCE), which do not originate from Hookston Station.

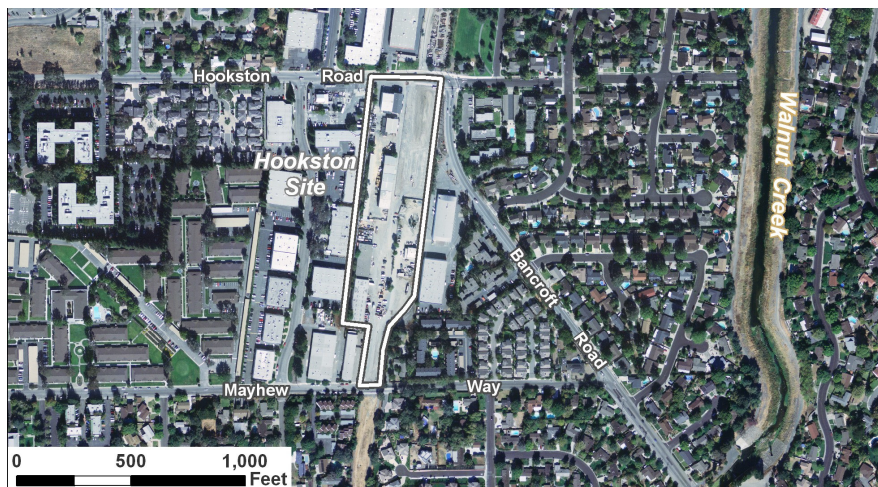
What is “acceptable” risk?

Hookston Area Receptor	Excess Cancer Risk*
Onsite worker	2.4 in one million
Onsite construction worker	43 in one million
Offsite resident	16 to 96 in one million

*maximum theoretical lifetime risk estimate

Risk Range	Status
Less than or equal to 1 in one million	Acceptable risk
1 in one million to 1 in ten thousand	Needs further study
Greater than 1 in ten thousand	Unacceptable risk

LOCATION MAP



RISK ASSESSMENT REVIEW PROCESS

The eight current and former owners who are the responsible parties for the Hookston Station Site submitted a Baseline Risk Assessment in March 2005. Board staff issued a fact sheet in May 2005 and convened a public meeting on June 20, 2005, during the thirty-day comment period. The Department of Health Services' Environmental Health Investigation Branch (EHIB) assisted Board staff in their review. In response to comments received (including comments by EHIB), the responsible parties submitted a revised Baseline Risk Assessment (October 2005), which was also made available for comment. The February 24, 2006, version of the Baseline Risk Assessment represents the results of discussions with Board staff and EHIB since October 2005 to achieve a final product that addresses potential maximum exposure and conforms to standard guidance. The February 2006 version of the Baseline Risk Assessment also reflects changes made in response to comments. Board staff approved the Baseline Risk Assessment on March 10, 2006, and attached a summary of comments and responses to those comments to the approval letter.

KEY COMMENTS ON THE BASELINE RISK ASSESSMENT

Below is a summary of some of the more commonly mentioned topics regarding the Baseline Risk Assessment. A full listing of the comments is included in the response to comments cited above. If you would like further information on these or any other specific topics, please contact Water Board staff.

Indoor Air Data

At least two sampling events for indoor air should occur in different seasons to consider variations that can occur due to weather conditions, according to the Department of Toxic Substances Control's 2005 vapor intrusion guidance document. Two rounds of sampling results (winter 2004 and summer 2005) are incorporated into the final version of the Baseline Risk Assessment. Further, residence-specific estimates of risk from vapor intrusion are included. This includes residents above the core of the TCE groundwater plume (TCE in groundwater at greater than 500 micrograms per liter), as well as residents above parts of the plume with lower concentrations of TCE. A network of ten permanent active soil gas monitoring locations helps validate predictions regarding the relationship between concentrations of TCE detected in groundwater, soil vapor, and indoor

air. Proposals for follow-up assessment or monitoring of indoor-air quality will be addressed in the forthcoming cleanup plan.

Past Exposure by Residents

The regulatory risk assessment process is not designed to evaluate past conditions and associated risks. It is likely that groundwater concentrations have been higher in the past above the core of the groundwater plume. A Baseline Risk Assessment that addresses risks forward for the next 30 years potentially underestimates exposures and associated risks that have already occurred.

Risks Attributed to Other Chemicals

Some of the groundwater contamination in the Hookston Station area originated from properties owned by others in the vicinity of the Hookston Station Site. We conclude that contaminants such as PCE, and MTBE (methyl tert butyl ether) originated at other nearby sources. The risk assessment includes calculations for all detected VOCs, including carcinogenic chemicals that did not originate at the Hookston Station Site (i.e., TCE, 1,1-DCE, and cis-1,2-DCE). Risk reduction will involve cleanup at all the source sites, including Hookston Station.

Proposition 65

The Baseline Risk Assessment mentions Proposition 65 as part of the uncertainty

discussion. However Proposition 65 is not really relevant to the risk assessment. Proposition 65, the Safe Drinking Water and Toxic Enforcement Act of 1986, requires the Governor to publish, at least annually, a list of chemicals known to the state to cause cancer or reproductive toxicity.

U.S. EPA Method for Calculating Risk From TCE

The U.S. Environmental Protection Agency has proposed a different toxicity factor for TCE. This value has not been accepted by the regulatory community. As such, the Water

Board and all other California environmental agencies continue to rely on the toxicity factor provided by the California Office of Environmental Health Hazard Assessment.

Industrial Workplace Standards

The Baseline Risk Assessment mentions worker exposure limits such as Permissible Exposure Limits and Threshold Limit Values. While these limits are applied to occupational exposure, they are not based on cancer risk and do not use any of the necessary assumptions required for the preparation of a risk assessment in the context of residential exposure.

SITE DESCRIPTION AND BACKGROUND

The Hookston Station Site is an 8-acre parcel located at the intersection of Hookston and Bancroft Roads in Pleasant Hill, California. The Site is currently occupied by commercial and light industrial businesses. Residences surround the Site on all sides.

The Site was formerly owned by the Southern Pacific Transportation Company and was used for a rail line and a station (Hookston Station). The property was transferred from Southern Pacific to Daniel C. Helix in 1983, and the Contra Costa County Redevelopment Agency (CCCRA) subsequently purchased the eastern portion of the Site in 1989. Union Pacific Railroad (UPRR) assumed responsibility for Southern Pacific's portion of the project following the merger with Southern Pacific in 1996.

Investigations regarding environmental impacts to soil and groundwater at the Site were initially conducted between 1989 and 1996 by various environmental consulting firms on behalf of the Contra Costa County Redevelopment Agency and Mr. Helix. These investigations discovered the presence of both petroleum-based products (such as gasoline) and chlorinated solvents (which are commonly used as degreasers) in the soil and groundwater at and downgradient from the Site. The solvents are also known as VOCs.

Depth to groundwater in the Hookston Station area is about 25 to 30 feet below ground surface. Groundwater is not a source of drinking water because all residences and businesses are served by Contra Costa Water District. Some homes in the area have backyard wells that are used for irrigation and filling swimming pools. Site investigation data show that groundwater contamination originating at Hookston Station and contamination originating at other properties has commingled and migrated in a north-northeasterly direction, and has impacted an area of approximately 35 acres. VOCs have been detected in shallow groundwater at concentrations above drinking water standards set by the state and the federal government. These chemicals have the potential to migrate from groundwater through the soil as a gas. VOCs have been detected in the indoor air of several homes located over the core of the groundwater plume. The concentrations of TCE in indoor air are marginally above regulatory screening levels. Several permanent sample points have been installed to better characterize the soil and groundwater.

Although a group of eight former and current owners (including Mr. Helix and UPRR) is currently performing environmental investigations and cleanup at the Hookston Station Site, the environmental releases that resulted in the current soil and groundwater impacts were not caused by any of these parties. Further, some of the groundwater contamination originated from properties owned by others in the vicinity of the Hookston Station Site. We conclude that contaminants such as PCE, and MTBE did not originate on the Hookston Station Site. The owners of properties at 3301-3341 Vincent Road, 3343-3355 Vincent Road, and 81 Mayhew Way have initiated remedial investigations into potential PCE releases, and the owner of the Haber Oil facility at 220 Hookston Road is investigating releases of MTBE and other fuel constituents. The Water Board will require responsible parties to conduct additional investigation and cleanup, as appropriate.

REGULATORY OVERSIGHT

The Water Board has been the lead agency for the Site since December 2000, and is currently overseeing compliance with the Site Cleanup Requirements (Order No. R2-2004-0081 adopted September 15, 2004). One of the tasks in the Site Cleanup Requirements is the completion of a Baseline Risk Assessment to quantify the risks to the community, help set appropriate cleanup goals, and provide the framework to evaluate potential remedial actions. The risk assessment identifies two exposure pathways that will drive the cleanup plan – vapor intrusion into indoor air and potential future use of groundwater. As noted, Water Board staff approved the Baseline Risk Assessment on March 10, 2006.

The Water Board oversees more than 3,000 site cleanup cases in the Bay Area, including more than 2,000 leaking fuel tank cases. Water Board staff direct investigation or cleanup work and set cleanup standards under Water Code authority. Responsible parties (e.g. past operators, landowners, or lessees) propose specific measures, perform the actual work, and submit technical reports documenting task completion. As part of this process, we circulate key documents, such as draft cleanup plans, to interested persons and provide an opportunity for comment on these documents. Interested persons include other agencies, local officials, non-profit organizations, and interested landowners and residents/occupants in the site vicinity.

NEXT STEPS

Results from the Baseline Risk Assessment will be used along with results from the Remedial Investigation to perform a Feasibility Study, which will evaluate remedial actions for impacts by chemicals originating at the Hookston Station Site. The Baseline Risk Assessment tells us that remediation needs to be evaluated and that measures to reduce vapor intrusion will do the most to reduce current estimated risk. The Feasibility Study is due July 10, 2006.

Water Board staff will be updating the Community Relations Plan while the Feasibility Study is being prepared. Representatives may be contacting community members to solicit input regarding specific concerns and recommendations regarding ways to improve communication.

Water Board staff plans to host an open house on May 25, 2006, from 6:30 to 8:30 p.m., and will be providing more details closer to the date.



SITE DOCUMENTS

All primary reports are housed at the Pleasant Hill Library, located at 1750 Oak Park Blvd., Pleasant Hill (phone: 925-646-6434). Many documents are available on the Water Board's Website:

<http://www.waterboards.ca.gov/sanfranciscobay/sitecleanupdocs.htm>.

The community is also invited to view documents and correspondence related to Hookston and other nearby sites at <http://geotracker.waterboards.ca.gov/>.

The following case numbers apply to the Hookston Station area:

Hookston Station Site 07S0156
Vincent Road at Mayhew Road 07S0183
Haber Oil 07-0432

Acronyms Defined

Acronym	Definition
DCE	Dichloroethylene – an environmental breakdown product of TCE
EHIB	Environmental Health Investigations Branch – CA Department of Health Services
MTBE	Methyl Tert Butyl Ether – a gasoline additive (no longer in use)
TCE	Trichloroethylene – an industrial cleaner/solvent
PCE	Perchloroethylene – also called tetrachloroethylene; an industrial cleaner/solvent
UPRR	Union Pacific Railroad – former owner of the Hookston Station property
VOC	Volatile Organic Compound – the chemicals of concern in the Hookston area

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